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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,250	02/11/2004	Masaaki Togashi	118627	1178
25944	7590	02/16/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			THOMAS, ERIC W	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/775,250

Applicant(s) 1

TOGASHI ET AL.

Examiner

Eric W. Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The indicated allowability of claim 1 (and all depending therefrom) is withdrawn in view of the newly discovered reference(s) to Togashi (JP 2002-164256). Rejections based on the newly cited reference(s) follow.

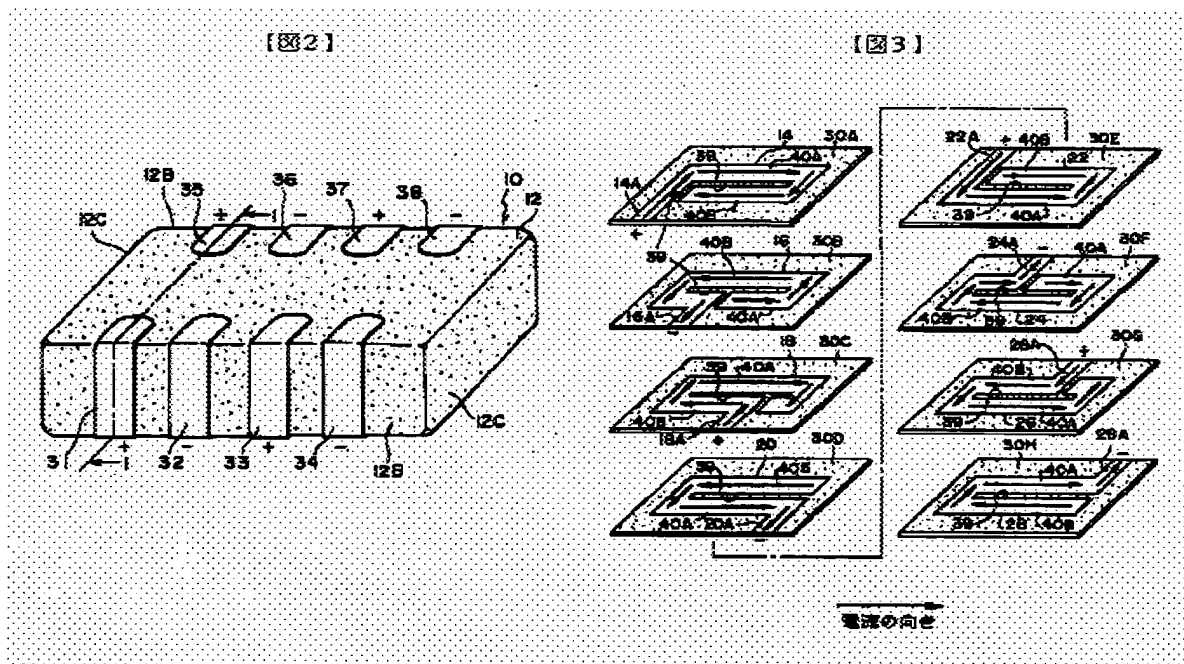
#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-14, 16-29, 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Togashi (2002-164256).



Togashi discloses in fig. 2 & 3, a multilayer capacitor comprising: a dielectric layer (30 A-H), and two types of first (20) and second (18) internal conductor layers

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insulated from each other by said dielectric layer and alternately arranged in a dielectric body, said multilayer capacitor characterized in that the first internal conductor layer is formed with at least one first cut part, the second internal conductor layer is formed with at least one second cut part, due to said cut parts, each internal conductor layer is formed with at least two channel parts connected at an uncut end in the same plane and the channel parts adjoining each other in the same plane carry current flowing in the reverse directions, and the first conductor layer is formed with a first lead part and the second conductor layer is formed with a second lead part at a position different from said first lead part so that current flows in reverse directions between the channel parts formed at the first and second internal conductor layers adjoining each other across the dielectric layer.

Regarding claim 3, Togashi discloses said lead parts are formed so as to be led out to only one surface of said dielectric body (see fig. 3 above).

Regarding claim 4, Togashi discloses said one surface of the dielectric body where said lead parts are led out to is formed with a first terminal electrode connected to said first lead parts and a second terminal electrode insulated so as not to be directly connected with said first terminal electrode and connected to said second lead parts.

Regarding claim 5, Togashi discloses said dielectric body is a rectangular parallelepiped, a length of a side of said dielectric body running along the stacking direction of said dielectric layers is made longer than a length of any other two sides running along a direction intersecting the side running along the stacking direction, and

said one surface of said dielectric body is formed with said first terminal electrode and second terminal electrode.

Regarding claim 6, Togashi discloses said one surface of said dielectric body is formed with said first terminal electrode and second terminal electrode so as to extend along said stacking direction substantially in parallel at a predetermined interval (see fig. 2 & 3 above).

Regarding claim 7, Togashi discloses the first lead part is formed near one first end in the longitudinal direction of said dielectric layer, and the second lead part is formed near another second end in the longitudinal direction of said dielectric layer.

Regarding claim 8, Togashi discloses the first and second cut parts for forming the channel parts in the first and second internal conductor layers adjoining each other across the dielectric layer are formed at substantially the same positions between the internal conductor layers adjoining each other (see fig. 2, 3)

Regarding claim 9, Togashi discloses a starting point of the first cut part formed in the first internal conductor layer starts from near the first lead part of said first internal conductor layer, a starting point of the second cut part formed in the second internal conductor layer starts from near the second lead part of said second internal conductor layer, and these cut parts are formed at substantially the same positions between the internal conductor layers adjoining each other (see fig. 3).

Regarding claim 10, Togashi discloses the first cut part formed at the first internal conductor layer (@40A) is substantially L-shaped, the second cut part (@ 40B) formed at the second internal conductor layer is a linear shape running through a substantial

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center of the dielectric layer along a longitudinal direction of said dielectric layer, and said first cut part and said second cut part are formed at substantially the same positions across said dielectric layer.

Regarding claim 11, Togashi discloses the first internal conductor layer (@ 40 A) is formed with a plurality of first cut parts, the second internal conductor layer (@ 40 B) is formed with a plurality of second cut parts at positions corresponding to said first cut parts, and uncut ends of corresponding cut parts across the dielectric layer are formed at opposite sides along the longitudinal direction of said cut parts.

Regarding claim 12, Togashi discloses said first and second cut parts are formed in the internal conductor layers to be alternately opposite in substantially perpendicular direction with respect to the longitudinal direction of said dielectric layer (as seen in the top portion of fig. 2 & 3).

Regarding claim 13, Togashi discloses the first and second cut parts are formed in the internal conductor layers to be alternately opposite in direction of inclination with respect to the longitudinal direction of the dielectric layer.

Regarding claim 14, Togashi discloses the width of the uncut ends is "substantially" equal to the width of the channels (as seen in fig. 2-3).

Regarding claim 16, Togashi discloses one of the channel parts formed by the first cut part is extended to form the first lead part and one of the channel parts formed by the second cut part is extended to form the second lead part (see fig. 3).

Regarding claim 17, Togashi discloses the first lead part is led out to a first side surface of said dielectric body, and the second lead part is led out to another second side surface of said dielectric body facing said first side surface (fig. 2-3).

Regarding claim 18, Togashi discloses said first side surface is formed with a first terminal electrode connected to the first lead part of said first internal conductor layer, and said second side surface is formed with a second terminal electrode connected to the second lead part of said second internal conductor layer.

Regarding claim 19, Togashi discloses said dielectric body is a rectangular parallelepiped, a length of a side of said dielectric body running along a stacking direction of said dielectric layers is made longer than a length of any other two sides running along a direction intersecting the side running along the stacking direction, and opposite side surfaces of said dielectric body are formed with said first terminal electrode and second terminal electrode.

Regarding claim 20, Togashi discloses the first and second cut parts for forming the channel parts of the first and second internal conductor layers adjoining each other across the dielectric layer are formed at substantially the same positions between the adjoining internal conductor layers.

Regarding claim 21, Togashi discloses a starting point of the first cut part formed in the first internal conductor layer starts from "near" the first lead part of said first internal conductor layer, a starting point of the second cut part formed in the second internal conductor layer starts from "near" the second lead part of said second internal

conductor layer, and these cut parts are formed at substantially the same positions between the adjoining internal conductor layers.

Regarding claim 22, Togashi discloses said first and second cut parts are formed running through a center part of each internal conductor layer along a longitudinal direction of each internal conductor layer and the uncut ends of the cut parts are arranged alternately opposite from each other via the dielectric layer (as seen in fig. 3 – (@30D and @30E).

Regarding claim 23, Togashi discloses one of the channel parts formed by said first cut part is extended so as to form the first lead part and one of the channel parts formed by said second cut part is extended to form the second lead part.

Regarding claim 24, Togashi discloses a width of said channel parts and a width of said first and second lead parts are “substantially” the same.

Regarding claim 25, Togashi discloses a width of said first and second lead parts is larger than a width of said channel parts (as illustrated in fig. 3).

Regarding claim 26, Togashi discloses said first and second cut parts are formed in the internal conductor layers to be alternately opposite in substantially perpendicular direction with respect to the longitudinal direction of said dielectric layer (top looking down).

Regarding claim 27, Togashi discloses said first and second cut parts are formed in the internal conductor layers to be alternately opposite in longitudinal direction of said dielectric layer.



Regarding claim 28, Togashi discloses said first and second cut parts are formed in the internal conductor layers to be alternately opposite in direction of inclination with respect to the longitudinal direction of said dielectric layer (from top view).

Regarding claim 29, Togashi discloses a width of said uncut ends is "substantially" equal to a width of said channels.

Regarding claim 31, Togashi discloses a multilayer capacitor, comprising: a dielectric layer (30B); and two types of, that is, first (16) and second (18), internal conductor layers insulated from each other by said dielectric layer and alternately arranged in a dielectric body, said multilayer capacitor characterized in that the first internal conductor layer is formed with at least one first cut part, the second internal conductor layer is formed with at least one second cut part, due to said cut parts, each internal conductor layer is formed with at least two channel parts connected at an uncut end in the same plane and the channel parts adjoining each other in the same plane carry current flowing in the reverse directions, wherein the first internal conductor layer is formed with a plurality of first cut parts, the second internal conductor layer is formed with a plurality of second cut parts at positions corresponding to said first cut parts, and uncut ends of corresponding cut parts across the dielectric layer are formed at opposite sides along the longitudinal direction of said cut parts.

Regarding claim 32, Togashi discloses said first and second cut parts are formed in the internal conductor layers to be alternately opposite in substantially perpendicular direction with respect to the longitudinal direction (top view) of said dielectric layer.

Regarding claim 33, Togashi discloses said first and second cut parts are formed in the internal conductor layers to be alternately opposite in direction of inclination with respect to the longitudinal direction of said dielectric layer.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 15, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Togashi (2002-164256).

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Regarding claims 15 & 30, Togashi discloses the claimed invention except for the width of the cut parts is 100 to 200  $\mu\text{m}$ . It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the width of the cut parts from 100 to 200  $\mu\text{m}$ , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.


### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W. Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on Monday - Friday 5:30 AM - 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ewt

 2/11/05  
**ERIC W. THOMAS**  
**PRIMARY EXAMINER**